

Complete Summary

GUIDELINE TITLE

American Gastroenterological Association medical position statement: guidelines for the management of malnutrition and cachexia, chronic diarrhea, and hepatobiliary disease in patients with human immunodeficiency virus infection.

BIBLIOGRAPHIC SOURCE(S)

American Gastroenterological Association medical position statement: guidelines for the management of malnutrition and cachexia, chronic diarrhea, and hepatobiliary disease in patients with human immunodeficiency virus infection. Gastroenterology 1996 Dec;111(6):1722-3. [1 reference]

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SCOPE

DISEASE/CONDITION(S)

- Malnutrition
- Cachexia
- Chronic diarrhea
- Hepatobiliary disease
- HIV infection

GUIDELINE CATEGORY

Evaluation
 Management

CLINICAL SPECIALTY

Gastroenterology
Infectious Diseases
Internal Medicine

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

To provide recommendations for the management of HIV-infected patients with malnutrition and cachexia, diarrhea and hepatobiliary diseases.

TARGET POPULATION

Patients infected with human immunodeficiency virus

INTERVENTIONS AND PRACTICES CONSIDERED

- Nutritional supplementation, appetite stimulants, enteral and parenteral alimentation
- Laboratory testing: bacterial culture and parasitic examination of stool, blood culture including mycobacterial culture, evaluation of bone marrow specimens
- Upper endoscopy, flexible sigmoidoscopy, colonoscopy, and mucosal biopsy
- Abdominal ultrasonography, computed tomography and percutaneous liver biopsy

MAJOR OUTCOMES CONSIDERED

1. Body weight, caloric intake, body mass indices
2. Incidence of opportunistic infections and neoplasms
3. Patient survival and quality of life

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Literature searches for the section on malnutrition and cachexia were performed for the period from 1980 to 1994 using MEDLINE (U.S. National Library of Medicine) and the medical subject headings "cachexia" and "malnutrition" and cross-referenced with "HIV" and "AIDS". Secondary searches were performed using the terms "nutrition" and "malabsorption". Relevant articles for the section on chronic diarrhea were identified by searching the MEDLINE database for the period from 1989 to 1994. The initial search strategy used the medical subject heading terms "chronic diarrhea" and "diarrhea" cross-referenced with "HIV" and

"AIDS". Secondary searches were undertaken using "enteric bacteria", "enteric parasite", "enteric pathogen", "mycobacteria", "cryptosporidia", "microsporidia", "and cytomegalovirus", which were cross-referenced with "HIV", "AIDS", "intestine", "colitis", and "gut". Articles for review for the section on hepatobiliary disease were obtained by searching the MEDLINE database for the period from 1985 to 1994 using the search terms "AIDS and liver", "HIV and liver", and "hepatitis and HIV". We identified further articles from the references cited in the literature identified by the MEDLINE searches.

NUMBER OF SOURCE DOCUMENTS

311 articles

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

The authors gave preference to primary rather than secondary sources such as review articles and book chapters and to larger series ($n > 15$) when available.

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Not stated

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not applicable

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Malnutrition and Cachexia:

Although weight loss is frequently multifactorial in etiology, a reduction in oral intake seems to be most critical. Reduced intake usually occurs in the setting of either systemic illnesses or oropharyngeal and/or esophageal disease. Evaluation of weight loss should be directed towards the systemic symptoms and signs that could indicate underlying disease(s). Successful treatment of the underlying disease frequently results in weight gain.

- Although no randomized, double-blind, placebo-controlled trials have established that nutritional supplementation provides a survival benefit in patients with AIDS, nutritional supplementation, when clinically indicated, represents sound clinical care. Guidelines for nutritional supplementation are no different than for non-HIV-infected patients.
- Therapy with appetite stimulants can improve caloric intake and result in weight gain. However, no survival benefit or reduction in the incidence of opportunistic infections has been documented with the use of these agents.
- When nutritional supplementation is clinically indicated, enteral alimentation is the preferred route of administration.
- For patient in whom enteral alimentation is contraindicated, total parenteral nutrition may be indicated under selected conditions. The use of long-term parenteral nutrition should be reserved for those patients in whom enteral nutrition is contraindicated and a meaningful life expectancy would be anticipated if nutritional therapy was given.

Chronic diarrhea:

Diagnostic work-up to identify the cause of HIV-related chronic diarrhea rests on the assumption that identifying and treating the cause(s) improves patient outcomes.

- A noninvasive evaluation, including stool test results (bacterial culture, parasite examination) should be initially performed. The number of stool tests that should be obtained is unknown, although three sets is recommended. Specific stool tests for cryptosporidia and microsporidia should be performed in patients with severe immunodeficiency (CD4 lymphocyte count, $<200/\text{mm}^3$). Testing for *Clostridium difficile* stool toxin should be performed in an appropriate clinical setting. Blood cultures should be performed in febrile patients. In those with CD4 of $<100/\text{mm}^3$, this should include mycobacterial culture.
- Upper endoscopy and flexible sigmoidoscopy or colonoscopy increase the diagnostic yield of enteric pathogens in patients in whom stool test results show no pathogen. The choice of upper or lower endoscopic evaluation should be tailored to the patient's clinical presentation and CD4 lymphocyte count. In

patients with nonbloody diarrhea and negative stool test results, flexible sigmoidoscopy is a reasonable next step.

- Patients are at risk for cytomegalovirus colitis when the CD4 count is $<100/\text{mm}^3$. The diagnosis is established by mucosal biopsy, which necessitates endoscopic evaluation. Flexible sigmoidoscopy and biopsy will be diagnostic in most cases. Colonoscopy is indicated for those patients in whom flexible sigmoidoscopy is negative and/or proximal colonic disease is suspected.
- Patients are at risk for small bowel Mycobacterium avium complex infection when the CD4 count is $<100/\text{mm}^3$. The diagnosis is established by upper endoscopy and duodenal biopsy. If blood cultures are positive for mycobacteria, endoscopy and biopsy is unnecessary, and antimicrobial therapy may be initiated.

Hepatobiliary Disease:

The causes of hepatobiliary disease differ depending on the extent of immunocompromise. In earlier stage HIV infection (CD4 cell count, $>500/\text{mm}^3$), hepatic complications usually represent liver-specific processes, such as drug-related hepatotoxicity, primary neoplasms, or infection with hepatotropic viruses. With progression of immunodeficiency to AIDS (CD4 cell count, $<200/\text{mm}^3$), the liver is generally involved as part of a systemic opportunistic infection due to M. avium complex, fungi, or cytomegalovirus.

Because the liver is often one of many sites involved with disseminated opportunistic infections in patients with AIDS, liver disease per se is rarely the primary cause of death. Nonetheless, the progressive jaundice, fever, and/or abdominal pain that may accompany hepatobiliary disease can significantly reduce quality of life and therefore merits evaluation in most patients.

- The evaluation of suspected hepatobiliary disease should be tailored to the history, physical examination, pattern of liver tests and CD4 lymphocyte count.
- Opportunistic infections and neoplasms usually involve the liver secondarily through lymphohematogenous dissemination. Thus, initial evaluation of blood or bone marrow specimens may provide an inferential diagnosis of liver disease.
- Ultrasonography is the test of choice when biliary disease is suspected. Abdominal computed tomographic scan is best reserved for patients with jaundice, marked hepatomegaly, or suspected peritoneal disease.
- Percutaneous liver biopsy should be reserved for patients in whom a treatable cause of parenchymal liver disease is suspected and when blood cultures and other noninvasive tests do not reveal a cause. It is unclear whether percutaneous liver biopsy is associated with a higher rate of complications in these patients.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

Not stated

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Improved nutritional status, survival, and quality of life in HIV-infected patients.

POTENTIAL HARMS

Risks of enteral nutrition include infection, and risks of parenteral nutrition include catheter-related complications such as infection and venous thrombosis.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

1. Although no randomized, double-blind, placebo-controlled trials have established that nutritional supplementation provides a survival benefit in patients with AIDS, nutritional supplementation, when clinically indicated, represents sound clinical care.
2. Few studies have evaluated the nutritional effects and safety of total parenteral nutrition in HIV-infected patients.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

End of Life Care
Getting Better
Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

American Gastroenterological Association medical position statement: guidelines for the management of malnutrition and cachexia, chronic diarrhea, and hepatobiliary disease in patients with human immunodeficiency virus infection. *Gastroenterology* 1996 Dec;111(6):1722-3. [1 reference]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1996 Dec (reviewed 2001)

GUIDELINE DEVELOPER(S)

American Gastroenterological Association - Medical Specialty Society

SOURCE(S) OF FUNDING

American Gastroenterological Association

GUIDELINE COMMITTEE

Patient Care Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Names of Committee Members: Wilcox CM, MD, Rabeneck L, MD, MPH, Friedman S, MD

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

According to the guideline developer, the Clinical Practice Committee meets 3 times a year to review all American Gastroenterological Association guidelines. This review includes new literature searches of electronic databases followed by expert committee review of new evidence that has emerged since the original publication date.

This guideline has been reviewed by the developer and is still considered to be current as of Dec 2001.

GUIDELINE AVAILABILITY

Electronic copies: Available from the [American Gastroenterological Association \(AGA\)](#).

Print copies: Available from American Gastroenterological Association, 4930 Del Ray Avenue, Bethesda, MD 20814. Cost is \$3.00/single copy.

AVAILABILITY OF COMPANION DOCUMENTS

The following background paper is available:

AGA technical review: malnutrition and cachexia, chronic diarrhea, and hepatobiliary disease in patients with human immunodeficiency virus infection. *Gastroenterology* 1996 Dec;111(6):1724-52 [311 references].

Print copies: Available from American Gastroenterological Association, 4930 Del Ray Avenue, Bethesda, MD 20814. Cost is \$3.00/single copy.

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on June 1, 1998. It was verified by the guideline developer on December 1, 1998.

COPYRIGHT STATEMENT

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